

WHAT IS CLAIMED IS:

1. A software controlled data replacement system for a cache, the system employing a class identifier and a tag replacement control indicia, comprising:

5 a replacement management table, employable to read the class identifier to create the tag replacement control indicia; and

the cache, comprising a plurality of sets, employable to disable a replacement of at least one of the plurality of sets as a function of the tag replacement control indicia.

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2. The system of Claim 1, wherein a set of the cache is replaced based upon a least recently used function.

15 3. The system of Claim 1, wherein the replacement management table is software-based.

4. The system of Claim 1, further comprising a range register employable to create the class identifier.

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5. The system of Claim 4, wherein the range register is employable to classify an address range as a default address range.

25 6. The system of Claim 4, wherein the range register is written to by software.

7. The system of Claim 4, wherein the range register receives the address as a result of a miss of an address.

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8. A method of determining information replacement in a cache, comprising:

creating a class identifier;  
reading the class identifier;

5 creating a tag replacement control indicia as a function of the class identifier through employment of a replacement management table; and

configuring replacement eligibility of a set in a cache as a function of the associated tag replacement control  
10 indicia.

9. The method of Claim 8, wherein the step of creating a tag replacement control indicia further comprises employing a software-managed replacement management table.

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10. The method of Claim 8, further comprising replacing information within the set of the cache with other information as a function of the tag replacement control indicia.

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11. The method of Claim 8, wherein creating a classID further comprises creating a non-default classID if a hit of an address occurs in a range register.

25 12. The method of Claim 8, further comprising discarding the tag replacement control indicia if there is a hit on the cache.

13. The method of Claim 8, further comprising the step  
30 of retrieving the data associated with an address from the second cache if there is a hit in the second cache.

14. The method of Claim 8, further comprising replacing a set based upon a least recently used function.

15. The method of Claim 8, further comprising  
5 employing an address range to associate with the class identifier.

16. The method of Claim 8, further comprising  
10 employing an algorithm bit to select an algorithm for the replacement of the eligible set.

17. A computer program product for determining  
information replacement in a cache, the computer program  
product having a medium with a computer program embodied  
15 thereon, the computer program comprising:

computer code for creating a class identifier;  
computer code for reading the class identifier;  
computer code for creating a tag replacement control  
indicia as a function of the class identifier through  
20 employment of a replacement management table; and  
computer code for configuring replacement eligibility  
of a set in a cache as a function of the associated tag  
replacement control indicia.

25 18. The computer program product of Claim 17, further  
comprising software for replacing information within the set  
of the cache with other information as a function of the tag  
replacement control indicia.

19. The computer program product of Claim 17, wherein software for creating a classID further comprises creating a non-default classID if a hit of an address occurs in a range register.

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20. A processor for determining information replacement in a cache, the processor including a computer program comprising:

computer code for creating a class identifier;  
10 computer code for reading the class identifier;  
computer code for creating a tag replacement control indicia as a function of the class identifier through employment of a replacement management table; and  
computer code for configuring replacement eligibility  
15 of a set in a cache as a function of the associated tag replacement control indicia.

21. The computer program product of Claim 20, further comprising:

20 software for replacing information within the set of the cache with other information as a function of the tag replacement control indicia.